

| L Number | Hits | Search Text | DB | Time stamp |
|----------|--------|---|---|------------------|
| 1 | 262 | ((570/208) or (570/209) or (570/210)).CCLS. | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2004/03/20 19:58 |
| 3 | 2 | ((570/208) or (570/209) or (570/210)).CCLS.) and 2,8-dimethylphenoxathiin | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2004/03/20 19:59 |
| 2 | 10 | 2,8-dimethylphenoxathiin | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2004/03/20 20:03 |
| 4 | 101 | chlorotoluene and chloroxylene | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2004/03/20 20:04 |
| 5 | 11 | (lewis adj acid) and (chlorotoluene and chloroxylene) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2004/03/20 20:07 |
| 6 | 209 | halogenation same aromatic adj compounds | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2004/03/20 20:08 |
| 7 | 48358 | (friedel near2 craft) or (lewis adj acid) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2004/03/20 20:10 |
| 8 | 66 | (halogenation same aromatic adj compounds) and ((friedel near2 craft) or (lewis adj acid)) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2004/03/20 20:11 |
| 9 | 105438 | xylene and toluene | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2004/03/20 20:11 |
| 10 | 28 | ((halogenation same aromatic adj compounds) and ((friedel near2 craft) or (lewis adj acid))) and (xylene and toluene) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2004/03/20 20:23 |
| 11 | 0 | ring near2 chlorinating near2 xylene | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2004/03/20 20:17 |
| 12 | 0 | ring near3 chlorinating near3 xylene | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2004/03/20 20:17 |
| 13 | 15 | ring same chlorinating same xylene | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2004/03/20 20:18 |
| 14 | 9 | mack-karl-ernst.in. or leitung-hans-jurgen.in. or decker-daniel.in. | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2004/03/20 20:24 |

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| NEWS | 5 | SEP 29 | DISSABS now available on STN |
| NEWS | 6 | OCT 10 | PCTFULL: Two new display fields added |
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| NEWS | 8 | OCT 28 | BIOSIS file segment of TOXCENTER reloaded and enhanced |
| NEWS | 9 | NOV 24 | MSDS-CCOHS file reloaded |
| NEWS | 10 | DEC 08 | CABA reloaded with left truncation |
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| NEWS | 13 | DEC 09 | STN Entry Date available for display in REGISTRY and CA/CAPLUS |
| NEWS | 14 | DEC 17 | DGENE: Two new display fields added |
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| NEWS | 16 | DEC 19 | CROPU no longer updated; subscriber discount no longer available |
| NEWS | 17 | DEC 22 | Additional INPI reactions and pre-1907 documents added to CAS databases |
| NEWS | 18 | DEC 22 | IFIPAT/IFIUDB/IFICDB reloaded with new data and search fields |
| NEWS | 19 | DEC 22 | ABI-INFORM now available on STN |
| NEWS | 20 | JAN 27 | Source of Registration (SR) information in REGISTRY updated and searchable |
| NEWS | 21 | JAN 27 | A new search aid, the Company Name Thesaurus, available in CA/CAPLUS |
| NEWS | 22 | FEB 05 | German (DE) application and patent publication number format changes |
| NEWS | 23 | MAR 03 | MEDLINE and LMEDLINE reloaded |
| NEWS | 24 | MAR 03 | MEDLINE file segment of TOXCENTER reloaded |
| NEWS | 25 | MAR 03 | FRANCEPAT now available on STN |
| NEWS EXPRESS | | | MARCH 5 CURRENT WINDOWS VERSION IS V7.00A, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 3 MARCH 2004 |
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0.21

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STRUCTURE FILE UPDATES: 19 MAR 2004 HIGHEST RN 665776-10-3

DICTIONARY FILE UPDATES: 19 MAR 2004 HIGHEST RN 665776-10-3

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

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=>Testing the current file.... screen

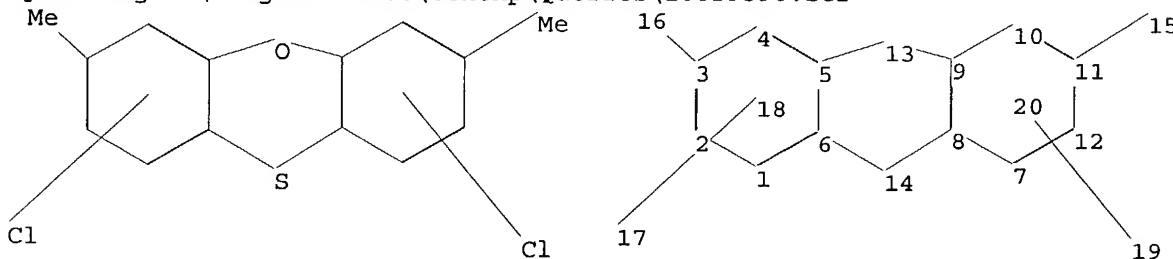
ENTER SCREEN EXPRESSION OR (END):end

=> screen 964

L1 SCREEN CREATED

=>

Uploading C:\Program Files\Stnexp\Queries\10659590.str



chain nodes :
15 16 17 19
ring nodes :

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1 2 3 4 5 6 7 8 9 10 11 12 13 14
chain bonds :
3-16 11-15
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-13 6-14 7-8 7-12 8-9 8-14 9-10 9-13 10-11
11-12
exact bonds :
3-16 5-13 6-14 8-14 9-13 11-15
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12
isolated ring systems :
containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 18:CLASS
19:CLASS 20:CLASS

L2 STRUCTURE UPLOADED

=> que L2 AND L1

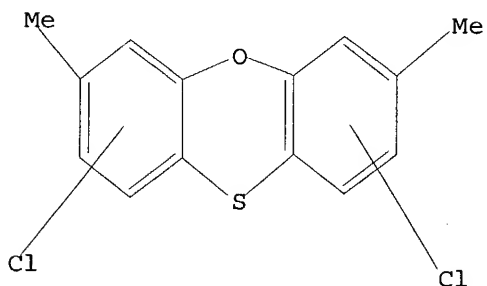
L3 QUE L2 AND L1

=> d

L3 HAS NO ANSWERS

L1 SCR 964

L2 STR



Structure attributes must be viewed using STN Express query preparation.

L3 QUE L2 AND L1

=> s l3

SAMPLE SEARCH INITIATED 20:40:18 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 7 TO ITERATE

100.0% PROCESSED 7 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 7 TO 298

PROJECTED ANSWERS: 0 TO 0

L4 0 SEA SSS SAM L2 AND L1

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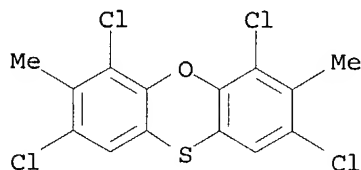
=> s l3 ful
FULL SEARCH INITIATED 20:40:23 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 162 TO ITERATE

100.0% PROCESSED 162 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

L5 1 SEA SSS FUL L2 AND L1

=> d

L5 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN 134696-94-9 REGISTRY
CN Phenoxathiin, 2,4,6,8-tetrachloro-3,7-dimethyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C14 H8 Cl4 O S
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus
COST IN U.S. DOLLARS

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|------------|---------|
| ENTRY | SESSION |
| 157.19 | 157.40 |

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FILE COVERS 1907 - 20 Mar 2004 VOL 140 ISS 13
FILE LAST UPDATED: 19 Mar 2004 (20040319/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> file chemistry patent

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=> s 134696-94-9

46 FILES SEARCHED...

62 FILES SEARCHED...

L6 1 134696-94-9

=> d

L6 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

10/659,590

AN 1991:449067 CAPLUS
DN 115:49067
TI Process for preparing 2-chloro-4-nitro-1-alkylbenzenes
IN Mais, Franz Josef; Fiege, Helmut
PA Bayer A.-G., Germany
SO Eur. Pat. Appl., 28 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--------------------------------------|------|----------|-----------------|----------|
| PI | EP 399293 | A1 | 19901128 | EP 1990-108778 | 19900510 |
| | EP 399293 | B1 | 19930901 | | |
| | R: BE, CH, DE, FR, GB, IT, LI, NL | | | | |
| | DE 3916664 | A1 | 19910103 | DE 1989-3916664 | 19890523 |
| | US 5095157 | A | 19920310 | US 1990-518063 | 19900502 |
| | DD 297957 | A5 | 19920130 | DD 1990-340904 | 19900522 |
| | JP 03020244 | A2 | 19910129 | JP 1990-131438 | 19900523 |
| PRAI | DE 1989-3916664 | | 19890523 | | |
| OS | CASREACT 115:49067; MARPAT 115:49067 | | | | |

=> s 2,8-dimethylphenoxathiin

15 FILES SEARCHED...
27 FILES SEARCHED...
37 FILES SEARCHED...
53 FILES SEARCHED...
60 FILES SEARCHED...
62 FILES SEARCHED...
68 FILES SEARCHED...

L7 31 2,8-DIMETHYLPHENOXATHIIN

=> s l7 and xylene

42 FILES SEARCHED...

L8 3 L7 AND XYLENE

=> dup rem l8

DUPLICATE IS NOT AVAILABLE IN 'AQUIRE, BIOCOMMERCE, CAOLD, FEDRIP, GENBANK, INVESTEXT, KOSMET, RDISCLOSURE, STANDARDS, USAN, DGENE, DPCI, PCTGEN, SYNTHLINE'.

ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE

PROCESSING COMPLETED FOR L8

L9 2 DUP REM L8 (1 DUPLICATE REMOVED)

=> d 1-2 bib ab

L9 ANSWER 1 OF 2 IFIPAT COPYRIGHT 2004 IFI on STN DUPLICATE 1

AN 10547021 IFIPAT;IFIUDB;IFICDB

TI METHOD FOR THE NUCLEAR CHLORINATION OF ORTHO-**XYLENE**

INF Decker; Daniel, Liederbach a. Ts., DE

Leitung; Hans-Jurgen, Frankfurt, DE

Mack; Karl-Ernst, Wiesbaden, DE

IN Decker Daniel (DE); Leitung Hans-Jurgen (DE); Mack Karl-Ernst (DE)

PAF Clariant GmbH, US

PA Clariant GmbH

AG Clariant Corporation Industrial Property Department, 4000 Monroe Road, Charlotte, NC, 28205, US

PI US 2004054239 A1 20040318

AI US 2003-659590 20030910

PRAI DE 2002-102422249 20020912

FI US 2004054239 20040318

10/659,590

DT Utility; Patent Application - First Publication
FS CHEMICAL
APPLICATION
CLMN 8
AB A method for the nuclear chlorination of ortho-**xylene** using a chlorinating agent in the presence of at least one FriedelCrafts catalyst and chloro-substituted 2,8-**dimethylphenoxathiin** as co-catalyst. The co-catalyst used is preferably tetrachlorinated 2,8-**dimethylphenoxathiin**, in particular 1,3,7, 9-tetrachloro-2,8-**dimethylphenoxathiin** of the formula

D R A W I N G

L9 ANSWER 2 OF 2 USPATFULL on STN
AN 81:1089 USPATFULL
TI Transition metal compound
IN Bye, Ashley D., Welwyn Garden City, England
Newton, Alan B., Welwyn Garden City, England
PA Imperial Chemical Industries Limited, London, England (non-U.S. corporation)
PI US 4243782 19810106
AI US 1976-696822 19760616 (5)
PRAI GB 1975-25534 19750616
GB 1976-2697 19760123
DT Utility
FS Granted
EXNAM Primary Examiner: Smith, Edward J.
LREP Cushman, Darby & Cushman
CLMN Number of Claims: 16
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1592
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A reaction product of a transition metal compound, for example titanium tetrachloride, and an organo-compound of a non-transition metal, for example an aluminium dialkyl halide, is treated with a sulphur containing organic compound, in an amount of up to 2.00, preferably up to 1.50 molar relative to the transition metal compound. The mixture is heated to a temperature in the range from 60° C. up to 160° C. Before treating with the sulphur compound, the reaction product can be heated to a temperature of up to 160° C. The Lewis Base compound is a sulphone, a sulphonamide or a fused-ring heterocyclic compound such as phenoxathiin. The product obtained can be used as a component of an olefine polymerization catalyst.

=> d his

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L4 0 S L3
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COMPENDEX, CONFSCI, COPPERLIT, CORROSION, DISSABS, ENCOMPLIT2, FEDRIP, GENBANK, INSPEC, INSPHYS, INVESTEXT, IPA, ...' ENTERED AT 20:40:55 ON 20 MAR 2004

L6 1 S 134696-94-9
L7 31 S 2,8-DIMETHYLPHENOXATHIIN
L8 3 S L7 AND XYLENE
L9 2 DUP REM L8 (1 DUPLICATE REMOVED)

=> d l7 1-31 ti

L7 ANSWER 1 OF 31 BABS COPYRIGHT 2004 BEILSTEIN MDL on STN
TI 2,8-Dimethylphenoxathiin 10-Oxide

L7 ANSWER 2 OF 31 BABS COPYRIGHT 2004 BEILSTEIN MDL on STN
TI Evidence for Intramolecular Hydrogen Bonding in β -Alanine Derivatives of 2,8-Dimethylphenoxathiin 4,6-Dicarboxylic Acid. Model Studies for Nucleation of Parallel β -Sheets

L7 ANSWER 3 OF 31 BABS COPYRIGHT 2004 BEILSTEIN MDL on STN
TI Macrocycles Containing Alanine and Phenoxathiin, Synthesis and Conformation in Solution

L7 ANSWER 4 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN
TI 2,8-Dimethylphenoxathiin 10-oxide

L7 ANSWER 5 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN
TI Electronic Effect on Rhodium Diphosphine Catalyzed Hydroformylation: The Bite Angle Effect Reconsidered

L7 ANSWER 6 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN
TI Electronic effects in the nickel-catalyzed hydrocyanation of styrene applying chelating phosphorus ligands with large bite angles

L7 ANSWER 7 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN
TI A Modular Approach to Polymer Architecture Control via Catenation of Prefabricated Biomolecular Segments: Polymers Containing Parallel β -Sheets Templated by a Phenoxathiin-Based Reverse Turn Mimic

L7 ANSWER 8 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN
TI Evidence for Intramolecular Hydrogen Bonding in β -Alanine Derivatives of 2,8-Dimethylphenoxathiin 4,6-Dicarboxylic Acid. Model Studies for Nucleation of Parallel β -Sheets

L7 ANSWER 9 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN
TI Parallel β -sheet conformation in macrocycles

L7 ANSWER 10 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN
TI Ring-chlorination of toluene

L7 ANSWER 11 OF 31 DISSABS COPYRIGHT (C) 2004 ProQuest Information and Learning Company; All Rights Reserved on STN
TI Nanostructure formation through beta-sheet self-assembly in silk-based multiblock copolymers

L7 ANSWER 12 OF 31 DISSABS COPYRIGHT (C) 2004 ProQuest Information and Learning Company; All Rights Reserved on STN
TI TEMPLATED PARALLEL BETA-SHEETS IN HYBRID-PEPTIDE POLYAMIDES (PHENOXATHIIN DIACID)

L7 ANSWER 13 OF 31 PASCAL COPYRIGHT 2004 INIST-CNRS. ALL RIGHTS RESERVED. on STN
TIEN 2,8-Dimethylphenoxathiin 10-oxide

10/659,590

- L7 ANSWER 14 OF 31 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
TI 2,8-dimethylphenoxathin 10-oxide
- L7 ANSWER 15 OF 31 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
TI EVIDENCE FOR INTRAMOLECULAR HYDROGEN-BONDING IN BETA-ALANINE DERIVATIVES
OF 2,8-DIMETHYLPHENOXATHIIN 4,6-DICARBOXYLIC
ACID - MODEL STUDIES FOR NUCLEATION OF PARALLEL BETA-SHEETS
- L7 ANSWER 16 OF 31 CASREACT COPYRIGHT 2004 ACS on STN
TI Ring-chlorination of toluene
- L7 ANSWER 17 OF 31 EUROPATFULL COPYRIGHT 2004 WILA on STN
TIEN Process for the hydrodechlorination of nuclear chlorinated
ortho-xylenes.
- L7 ANSWER 18 OF 31 IFIPAT COPYRIGHT 2004 IFI on STN
TI METHOD FOR THE NUCLEAR CHLORINATION OF ORTHO-XYLENE
- L7 ANSWER 19 OF 31 IFIPAT COPYRIGHT 2004 IFI on STN
TI PROCESS FOR RING-CHLORINATING TOLUENE
- L7 ANSWER 20 OF 31 PATDPAFULL COPYRIGHT 2004 DPMA on STN
TI Neue Phosphine und Verfahren zu ihrer Herstellung
- L7 ANSWER 21 OF 31 PATDPAFULL COPYRIGHT 2004 DPMA on STN
TI Verfahren zur Herstellung von Aldehyden
- L7 ANSWER 22 OF 31 USPATFULL on STN
TI Method for the nuclear chlorination of ortho-xylene
- L7 ANSWER 23 OF 31 USPATFULL on STN
TI Benzothioxepanone and benzothioxepane thione compounds
- L7 ANSWER 24 OF 31 USPATFULL on STN
TI Process for the preparation of chloro-alkylbenzenes and novel
cocatalysts therefor
- L7 ANSWER 25 OF 31 USPATFULL on STN
TI Process for the preparation of chloro-alkylbenzenes and novel
cocatalysts therefor
- L7 ANSWER 26 OF 31 USPATFULL on STN
TI Process for ring-chlorinating toluene
- L7 ANSWER 27 OF 31 USPATFULL on STN
TI Transition metal compound
- L7 ANSWER 28 OF 31 USPATFULL on STN
TI Cyclic sulphur compounds
- L7 ANSWER 29 OF 31 USPATFULL on STN
TI Cyclic sulphur compounds triazolyl substituted phenoxathin 10, 10
dioxides
- L7 ANSWER 30 OF 31 USPATFULL on STN
TI Cyclic sulphur compounds
- L7 ANSWER 31 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
TI Nucleus chlorination of toluene with lewis acid catalyst - and
chlorination prod. of 2,6-di methyl-phenoxathiin as co-catalysts.

10/659,590

=> d 1,4,13,14,17,18,22,25 bib ab

2 ANSWERS ARE AVAILABLE. SPECIFIED ANSWER NUMBER EXCEEDS ANSWER SET SIZE

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ENTER ANSWER NUMBER OR RANGE (1):17

ANSWER NUMBERS NOT CORRECTLY SPECIFIED

Enter an answer number, Example: 10

several answer numbers, Example: 3,7,10

a range of answer numbers, Example: 5-10

or a combination of these. Example: 3,7,9-10,15

ENTER ANSWER NUMBER OR RANGE (1):end

=> d his

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FILE 'REGISTRY' ENTERED AT 20:39:57 ON 20 MAR 2004

L1 SCREEN 964

L2 STRUCTURE UPLOADED

L3 QUE L2 AND L1

L4 0 S L3

L5 1 S L3 FUL

FILE 'CAPLUS' ENTERED AT 20:40:37 ON 20 MAR 2004

FILE 'AGRICOLA, ALUMINIUM, ANABSTR, APOLLIT, AQUIRE, BABS, BIOCOMMERCE, BIOTECHNO, CABA, CAOLD, CAPLUS, CBNB, CEABA-VTB, CEN, CERAB, CIN, COMPENDEX, CONFSCI, COPPERLIT, CORROSION, DISSABS, ENCOMPLIT2, FEDRIP, GENBANK, INSPEC, INSPHYS, INVESTEXT, IPA, ...' ENTERED AT 20:40:55 ON 20 MAR 2004

L6 1 S 134696-94-9

L7 31 S 2,8-DIMETHYLPHENOXATHIIN

L8 3 S L7 AND XYLENE

L9 2 DUP REM L8 (1 DUPLICATE REMOVED)

=> d 17 1,4,13,14,17,18,22,25 bib ab

L7 ANSWER 1 OF 31 BABS COPYRIGHT 2004 BEILSTEIN MDL on STN

AN 6156405 BABS

TI **2,8-Dimethylphenoxathiin** 10-Oxide

AU Bennett, Stephen R.; Kennedy, Alan R.; Khalaf, Abedawn I.; Waigh, Roger D.

SO Acta Crystallogr.Sect.C: Cryst.Struct.Commun. (1998), 54(10), 1511 - 1513
CODEN: ACSCEE

DT Journal

LA English

SL English

AB An important precursor to biologically active compounds, **2,8-dimethylphenoxathiin** 10-oxide (C₁₄H₁₂O₂S), is found to adopt a folded geometry. The dihedral angles between the aromatic rings are 11.8(2) and 15.4(2) deg for the two independent molecules, with the S atoms lying out of the ring planes.

L7 ANSWER 4 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:722039 CAPLUS

DN 129:337870

TI **2,8-Dimethylphenoxathiin** 10-oxide

AU Bennett, Stephen R.; Kennedy, Alan R.; Khalaf, Abedawn I.; Waigh, Roger D.

CS Dep. Pharmaceutical Sciences, Univ. Strathclyde, Glasgow, G1 1XW, UK

SO Acta Crystallographica, Section C: Crystal Structure Communications
(1998), C54(10), 1511-1513

CODEN: ACSCEE; ISSN: 0108-2701

10/659,590

PB Munksgaard International Publishers Ltd.
DT Journal
LA English
AB An important precursor to biol. active compds., **2,8-dimethylphenoxathiin 10-oxide** (C₁₄H₁₂O₂S), is found to adopt a folded geometry. The dihedral angles between the aromatic rings are 11.8(2) and 15.4(2)° for the two independent mols., with the S atoms lying out of the ring planes. Crystallog. data are given.
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 13 OF 31 PASCAL COPYRIGHT 2004 INIST-CNRS. ALL RIGHTS RESERVED.
on STN
AN 1998-0509467 PASCAL
CP Copyright .COPYRGT. 1998 INIST-CNRS. All rights reserved.
TIEN **2,8-Dimethylphenoxathiin 10-oxide**
AU BENNETT S. R.; KENNEDY A. R.; KHALAF A. I.; WAIGH R. D.
CS Department of Pharmaceutical Sciences, University of Strathclyde, Glasgow G1 1XW, Scotland, United Kingdom; Department of Pure & Applied Chemistry, University of Strathclyde, Glasgow G1 1XL, Scotland, United Kingdom
SO Acta crystallographica. Section C, Crystal structure communications, (1998), 54(p.10), 1511-1513, 12 refs.
ISSN: 0108-2701 CODEN: ACSCEE
DT Journal
BL Analytic
CY Denmark
LA English
AV INIST-5160C, 354000071502470570
AB An important precursor to biologically active compounds, **2,8-dimethylphenoxathiin 10-oxide** (C₁₄H₁₂O₂S), is found to adopt a folded geometry. The dihedral angles between the aromatic rings are 11.8 (2) and 15.4 (2)° for the two independent molecules, with the S atoms lying out of the ring planes.

L7 ANSWER 14 OF 31 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 1998:846366 SCISEARCH
GA The Genuine Article (R) Number: 133XJ
TI **2,8-dimethylphenoxathiin 10-oxide**
AU Bennett S R (Reprint); Kennedy A R; Khalaf A I; Waigh R D
CS UNIV STRATHCLYDE, DEPT PHARMACEUT SCI, GLASGOW G1 1XW, LANARK, SCOTLAND (Reprint); UNIV STRATHCLYDE, DEPT PURE & APPL CHEM, GLASGOW G1 1XL, LANARK, SCOTLAND
CYA SCOTLAND
SO ACTA CRYSTALLOGRAPHICA SECTION C-CRYSTAL STRUCTURE COMMUNICATIONS, (15 OCT 1998) Vol. 54, Part 10, pp. 1511-1513.
Publisher: MUNKSGAARD INT PUBL LTD, 35 NORRE SOGADE, PO BOX 2148, DK-1016 COPENHAGEN, DENMARK.
ISSN: 0108-2701.
DT Article; Journal
FS PHYS
LA English
REC Reference Count: 12
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB An important precursor to biologically active compounds, **2,8-dimethylphenoxathiin 10-oxide** (C₁₄H₁₂O₂S), is found to adopt a folded geometry. The dihedral angles between the aromatic rings are 11.8(2) and 15.4(2)degrees for the two independent molecules, with the S atoms lying out of the ring planes.

L7 ANSWER 17 OF 31 EUROPATFULL COPYRIGHT 2004 WILA on STN

10/659,590

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

AN 1398305 EUROPATFULL ED 20040318 EW 200412 FS OS
TIEN Process for the hydrodechlorination of nuclear chlorinated
ortho-xylenes.
TIDE Verfahren zur Hydrodechlorierung von kernchlorierten ortho-Xylolen.
TIFR Procédé pour la deshydrochloration d' ortho-xylenes chlorés dans le
noyau.
IN Mack, Karl-Ernst, Dr., Klingenbachstrasse 43, 65207 Wiesbaden, DE;
Decker, Daniel, Dr., Im Kohlruss 27, 65834 Liederbach a. Ts., DE
PA Clariant GmbH, Brueningstrasse 50, 65929 Frankfurt am Main, DE
PAN 2348920
OS MEPA2004023 EP 1398305 A1 0006
SO Wila-EPZ-2004-H12-T1a
DT Patent
LA Anmeldung in Deutsch; Veroeffentlichung in Deutsch
DS R AT; R BE; R BG; R CH; R CY; R CZ; R DE; R DK; R EE; R ES; R FI; R FR;
R GB; R GR; R HU; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R RO; R SE;
R SI; R SK; R TR; R AL; R LT; R LV; R MK
PIT EPA1 EUROPAEISCHE PATENTANMELDUNG
PI EP 1398305 A1 20040317
OD 20040317
AI EP 2003-19808 20030830
PRAI DE 2002-10242223 20020912

L7 ANSWER 18 OF 31 IFIPAT COPYRIGHT 2004 IFI on STN
AN 10547021 IFIPAT;IFIUDB;IFICDB
TI METHOD FOR THE NUCLEAR CHLORINATION OF ORTHO-XYLENE
INF Decker; Daniel, Liederbach a. Ts., DE
Leitung; Hans-Jurgen, Frankfurt, DE
Mack; Karl-Ernst, Wiesbaden, DE
IN Decker Daniel (DE); Leitung Hans-Jurgen (DE); Mack Karl-Ernst (DE)
PAF Clariant GmbH, US
PA Clariant GmbH
AG Clariant Corporation Industrial Property Department, 4000 Monroe Road,
Charlotte, NC, 28205, US
PI US 2004054239 A1 20040318
AI US 2003-659590 20030910
PRAI DE 2002-102422249 20020912
FI US 2004054239 20040318
DT Utility; Patent Application - First Publication
FS CHEMICAL
APPLICATION
CLMN 8
AB A method for the nuclear chlorination of ortho-xylene using a
chlorinating agent in the presence of at least one FriedelCrafts catalyst
and chloro-substituted 2,8-
dimethylphenoxathiin as co-catalyst. The co-catalyst used is
preferably tetrachlorinated 2,8-
dimethylphenoxathiin, in particular 1,3,7, 9-tetrachloro-
2,8-dimethylphenoxathiin of the formula

D R A W I N G

L7 ANSWER 22 OF 31 USPATFULL on STN
AN 2004:71010 USPATFULL
TI Method for the nuclear chlorination of ortho-xylene
IN Mack, Karl-Ernst, Wiesbaden, GERMANY, FEDERAL REPUBLIC OF
Leitung, Hans-Jurgen, Frankfurt, GERMANY, FEDERAL REPUBLIC OF
Decker, Daniel, Liederbach a. Ts., GERMANY, FEDERAL REPUBLIC OF
PA Clariant GmbH (U.S. individual)
PI US 2004054239 A1 20040318

10/659,590

AI US 2003-659590 A1 20030910 (10)
PRAI DE 2002-10242224 20020912
DT Utility
FS APPLICATION
LREP Clariant Corporation, Industrial Property Department, 4000 Monroe Road,
Charlotte, NC, 28205
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 229
AB A method for the nuclear chlorination of ortho-xylene using a
chlorinating agent in the presence of at least one Friedel-Crafts
catalyst and chloro-substituted 2,8-
dimethylphenoxathiin as co-catalyst. The co-catalyst used is
preferably tetrachlorinated 2,8-
dimethylphenoxathiin, in particular 1,3,7,9-tetrachloro-
2,8-dimethylphenoxathiin of the formula
##STR1##

L7 ANSWER 25 OF 31 USPATFULL on STN
AN 97:31871 USPATFULL
TI Process for the preparation of chloro-alkylbenzenes and novel
cocatalysts therefor
IN Krishnamurti, Ramesh, Williamsville, NY, United States
Nagy, Sandor, Grand Island, NY, United States
Smolka, Thomas F., West Seneca, NY, United States
PA Occidental Chemical Corporation, Niagara Falls, NY, United States (U.S.
corporation)
PI US 5621153 19970415
AI US 1995-426208 19950421 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Shah, Mukund J.; Assistant Examiner: Wong, King Lit
LREP Cookfair, Arthur S., Fuerle, Richard D.
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 522

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for the para-directed nuclear chlorination of an alkylbenzene,
such as toluene, comprises reacting the alkylbenzene with chlorine in
the presence of a Lewis acid catalyst and a novel co-catalyst of the
formula: ##STR1## where Z is ##STR2## ; and R is Cl, Br, F, C.sub.1 to
C.sub.8 alkyl to C.sub.1 to C.sub.8 alkoxy; x and y are each hydrogen,
or taken together form a fused cyclopentyl or cyclohexyl ring; n is 0, 1
or 2, with the proviso that when Z is [3], n is 0 or 1.

=> file patent

FILE 'ENCOMPPAT' ACCESS NOT AUTHORIZED

COST IN U.S. DOLLARS

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| 158.84 | 316.68 |

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| -0.69 | -0.69 |

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FILE 'WPINDEX' ACCESS NOT AUTHORIZED

=> fsearch ep0173222/pn

SEA EP0173222/PN

28 FILES SEARCHED...

L10 7 EP0173222/PN

FSE

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SET COMMAND COMPLETED

SEL L10 1- PN,APPS

L11 SEL L10 1- PN APPS : 16 TERMS

SEA L11

'APPS' IS NOT A VALID FIELD CODE

'APPS' IS NOT A VALID FIELD CODE

20 FILES SEARCHED...

'APPS' IS NOT A VALID FIELD CODE

L12 21 L11

10/659,590

*** ITERATION 2 ***

SEL L12 1- PN,APPS
L11 SEL L10 1- PN APPS : 17 TERMS

SEA L11
'APPS' IS NOT A VALID FIELD CODE
'APPS' IS NOT A VALID FIELD CODE
22 FILES SEARCHED...
'APPS' IS NOT A VALID FIELD CODE
L12 21 L11

FSORT L12
L13 21 FSO L12

1 Multi-record Family Answers 1-21
0 Individual Records
0 Non-patent Records

SET SMARTSELECT OFF
SET COMMAND COMPLETED

SET HIGHLIGHTING DEF
SET COMMAND COMPLETED

=> d 1-21 ti

L13 ANSWER 1 OF 21 CAPLUS COPYRIGHT 2004 ACS on STN FAMILY 1
TI Ring-chlorination of toluene

L13 ANSWER 2 OF 21 CASREACT COPYRIGHT 2004 ACS on STN DUPLICATE 1
TI Ring-chlorination of toluene

L13 ANSWER 3 OF 21 DPCI COPYRIGHT 2004 THOMSON DERWENT on STN FAMILY 1
TI Nucleus chlorination of toluene with lewis acid catalyst - and
chlorination prod. of 2,6-di methyl-phenoxathiin as co-catalysts.

L13 ANSWER 4 OF 21 ENCOMPAT2 COPYRIGHT 2004 ELSEVIER ENGINEERING
INFORMATION INC. on STN FAMILY 1
TI NUCLEUS CHLORINATION OF TOLUENE WITH LEWIS ACID CATALYST - AND
CHLORINATION PROD. OF 2,6-DIMETHYL PHENOXATHIIN AS CO-CATALYSTS

L13 ANSWER 5 OF 21 IFIPAT COPYRIGHT 2004 IFI on STN FAMILY 1
TI PROCESS FOR RING-CHLORINATING TOLUENE

L13 ANSWER 6 OF 21 INPADOC COPYRIGHT 2004 EPO on STN FAMILY DUPLICATE 1
TI TOLUENE RING CHLORINATION.

L13 ANSWER 7 OF 21 INPADOC COPYRIGHT 2004 EPO on STN FAMILY DUPLICATE 1
TI PROCESS FOR RING-CHLORINATING TOLUENE .

L13 ANSWER 8 OF 21 INPADOC COPYRIGHT 2004 EPO on STN FAMILY DUPLICATE 1
TI PROCESS FOR RING-CHLORINATING TOLUENE.

L13 ANSWER 9 OF 21 INPADOC COPYRIGHT 2004 EPO on STN FAMILY DUPLICATE 1
TI PROCESS FOR THE NUCLEAR CHLORINATION OF TOLUENE .

L13 ANSWER 10 OF 21 INPADOC COPYRIGHT 2004 EPO on STN FAMILY DUPLICATE
1
TI PROCESS FOR RING-CHLORINATING TOLUENE.

10/659,590

L13 ANSWER 11 OF 21 INPADOC COPYRIGHT 2004 EPO on STN FAMILY DUPLICATE
1
TI VERFAHREN ZUR KERNCHLORIERUNG VON TOLUOL.

L13 ANSWER 12 OF 21 INPADOC COPYRIGHT 2004 EPO on STN FAMILY DUPLICATE
1
TI PROCESSO PARA A CLORACAO NUCLEAR DE TOLUENO .

L13 ANSWER 13 OF 21 INPADOC COPYRIGHT 2004 EPO on STN FAMILY DUPLICATE
1
TI PROCESS FOR THE NUCLEAR CHLORINATION OF TOLUENE .

L13 ANSWER 14 OF 21 JAPIO (C) 2004 EPO on STN FAMILY 1
TI TOLUENE RING CHLORINATION

L13 ANSWER 15 OF 21 PATDPA COPYRIGHT 2004 DPMA/FIZ KA on STN FAMILY 1
TI (A1) Verfahren zur Kernchlorierung von Toluol

L13 ANSWER 16 OF 21 PATDPA COPYRIGHT 2004 DPMA/FIZ KA on STN FAMILY 1
TI (B1) (A) Verfahren zur Kernchlorierung von Toluol.

L13 ANSWER 17 OF 21 PATDPAFULL COPYRIGHT 2004 DPMA on STN FAMILY
DUPLICATE 1
TI Verfahren zur Kernchlorierung von Toluol

L13 ANSWER 18 OF 21 PATOSDE COPYRIGHT 2004 WILA on STN FAMILY 1
DEA1 OFFENLEGUNGSSCHRIFT
TI Verfahren zur Kernchlorierung von Toluol.

L13 ANSWER 19 OF 21 PATOSEP COPYRIGHT 2004 WILA on STN FAMILY 1
EPA1 EUROPAEISCHE PATENTANMELDUNG
EPB1 EUROPAEISCHE PATENTSCHRIFT
EPLS LEGAL STATUS
TIEN Process for the nuclear chlorination of toluene.
TIEN Process for the nuclear chlorination of toluene.

L13 ANSWER 20 OF 21 USPATFULL on STN FAMILY 1
TI Process for ring-chlorinating toluene

L13 ANSWER 21 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN FAMILY 1
TI Nucleus chlorination of toluene with lewis acid catalyst - and
chlorination prod. of 2,6-di methyl-phenoxathiin as co-catalysts.

=> d 20

L13 ANSWER 20 OF 21 USPATFULL on STN FAMILY 1
AN 87:15400 USPATFULL
TI Process for ring-chlorinating toluene
IN Wolfram, Hans, Kelkheim, Germany, Federal Republic of
PA Hoechst Aktiengesellschaft, Frankfurt am Main, Germany, Federal Republic
of (non-U.S. corporation)
PI US 4647709 19870303
AI US 1985-770714 19850829 (6)
PRAI DE 1984-3432095 19840831
DT Utility
FS Granted
LN.CNT 328
INCL INCLM: 570/209.000
INCLS: 570/210.000
NCL NCLM: 570/209.000

10/659,590

NCLS: 570/210.000
IC [4]
ICM: C07C017-12
EXF 570/209; 570/210
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> log y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

159.75

476.43

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

0.00

-0.69

STN INTERNATIONAL LOGOFF AT 21:00:32 ON 20 MAR 2004